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EXAMINER	
BURLESON, MICHAEL L	
ART UNIT	PAPER NUMBER
2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/052,360	FUKAO, SUZUKO	
	Examiner	Art Unit	
	Michael Burleson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 8-12 of Applicant's remarks, filed 02/06/2007, with respect to the rejection(s) of claim(s) 1-18 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hiratsuka et al. US 6108441 in view of Yumiba et al. US 5289295.

2. Applicant states that no provision is made in for designating a region in the color space, such that the color adjustment process is only performed on original colors that are within the region. Examiner disagrees with Applicant. Hiratsuka et al. teaches of performing color adjustment on a banana (11) and orange (12), which are designated (figure 10, column 9,lines 50-67-column 10,lines 1-5). The reference color is the yellow of banana (11) and the adjustment color is greenish yellow (column 9,lines 50-61).

3. Applicant states that Hiratsuka et al. does not teach of a color adjustment region, having a boundary within the relevant color space and containing the reference and the adjustment color. Examiner agrees with Applicant. Yumiba et al. teaches of a boundary in a color adjustment area that is designated (column 8,lines 4-21).

4. Claims 1-18 are rejected.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

1. Regarding claims 1 and 16, the claimed subject matter are merely program steps per se as evident in claims 17. All computer programs are based on a mathematical algorithm or computer logic. Even though the claims recite a seemingly statutory apparatus, the claims in reality provide patent protection for every substantial practical application of the mathematical algorithm or computer logic itself (35 USC 101 guidelines page 53). Examiner suggests an output apparatus displaying or outputting the results for the claimed processor provided that there is support in Applicant's specification.

2. Regarding claim 15, the claimed subject matter are computer program steps as evident in claim 17 of the current application. Since the method of claim 15 fails to meet subject matter eligibility (see 35 USC 101 guidelines pages 23 and 30), based on claim 17 of the current application, the subject matter in these claims is non-statutory. Examiner suggests adding an output step (e.g., displaying or printing) provided that there is support in the applications specification.

3. Regarding claim 17, the claimed subject matter are merely computer program steps per se and hence non-statutory (35 USC 101 guidelines page 53). Examiner suggests – A computer readable medium, which embodies a program to be executed by a computer --.

4. It is inherent that claims 2-14 and 18 are also rejected for depending upon a rejected independent claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1,2 and 5-13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiratsuka et al. US 6108441 in view of Yumiba et al. US 5289295.

1. Regarding claim 1, Hiratsuka et al. teaches of a computer system (figure 3), which reads on an image processing apparatus for performing color adjustment for image data. Hiratsuka et al. teaches of determining if a pixel data are in LCH color space (column 8,lines 17-25), which reads on a region determining means for determining whether a pixel value of input image data is in the adjustment region. Hiratsuka et al. teaches of determining pixel data on color space in accordance with color adjustment parameters (column 9,lines 5-25), which reads on adjusted value

calculating means for calculating an adjusted value of the image data on the basis of a function of the reference color, the adjusted color and a boundary of the adjustment region, if said region determining means determines that the pixel value of the image data is in the adjustment region.

8. Hiratsuka et al. fails to teach of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color.

9. Yumiba et al. teaches of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space (column 6,lines 64-67, column 7,lines 1-22), wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color (column 7,lines 1-41 and column 8,lines 4-21 and 37-44).

10. Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Hiratsuka et al. wherein Hiratsuka et al.'s apparatus is applied to designating a color adjustment area of Yumiba et al. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Hiratsuka et al. by the teaching of Yumiba et al. in order to change

the color of a selected part of an image while maintaining the color of other parts unchanged and retaining color continuity between the changed part and unchanged part as evident in Yumiba et al column 1,lines 10-15).

2. Regarding claim 2, Yumiba et al. shows that the region has a geometric shape (figure 3a), which reads on the adjustment region is defined as a geometric figure in the color space.

3. Regarding claim 5, Hiratsuka et al. shows an intersection of a straight line (figure 5), which reads on the adjusted value of the image data on the basis of an intersection of a straight line which connects the reference color and the image data and the contour of the adjustment region.

4. Regarding claim 6, Hiratsuka et al. teaches that an Euclidean distance is used in calculating color adjustment values (column 8, lines 35-45 and figure 5), which reads on said adjusted value calculating means calculates the adjusted value of the image data such that the adjustment amount linearly changes with respect to a distance between the image data and the reference color in the color space.

5. Regarding claim 7, Hiratsuka et al. teaches that an Euclidean distance is used in calculating color adjustment values (column 8, lines 35-45 and figure 5), which reads on said adjusted value calculating means calculates the adjusted value of the image data such that the adjustment amount linearly changes with respect to a distance between the image data and the reference color in the color space.

6. Regarding claim 8, Hiratsuka et al. teaches of a color pallet (5) (column 6,lines 57-67, column 7,lines 8-15 and column 9, lines 25-30), which reads on the image data is an element of a correction table for color matching.

7. Regarding claim 9, Hiratsuka et al. teaches that the designated adjustment color is converted to LCH color space (column 7,lines 1-20), which reads on a coordinate transforming means for transforming the image data into the coordinate system of a predetermined color space, wherein said region determining means and said adjusted value calculating means each perform operations on the image data transformed into the predetermined color space.

8. Regarding claim 10, Hiratsuka et al. teaches of a computer system (figure 3), designating a color before color adjustment, an adjustment color and teaches of a LCH color space (column 7,lines 8-65, column 8,lines 17-25 and figure 5), which reads on designating means designates the reference color, the adjusted color and the adjustment region as values in said predetermined color space.

9. Regarding claim 11, Hiratsuka et al. teaches of inverse operations performed on color values in LCH color space (column 9,lines 5-10), which reads on said coordinate transforming means inversely transforms the adjusted value, in the predetermined color space, calculated by said adjusted value calculating means, into the color space coordinate system of the image data.

10. Regarding claim 12, Hiratsuka et al. teaches of inverse operations performed on color values in LCH color space (column 9,lines 5-10), which reads on said coordinate transforming means performs affine transformation and inverse transformation thereof.

11. Regarding claim 13, Hiratsuka et al. teaches a conversion matrix that is stored (column 7,lines 15-65), which reads on transformation matrix calculating means for calculating, on the basis of the reference color, the adjusted color and the adjustment region, a transformation matrix used by said coordinate transforming means and matrix storage means for storing the transformation matrix.

12. Regarding claim 15, Hiratsuka et al. teaches of a computer system (figure 3), which reads on an image processing method for performing color adjustment for image data. Hiratsuka et al. teaches of determining if a pixel data are in LCH color space (column 8,lines 17-25), which reads on a determining whether a pixel value of input image data is in the adjustment region. Hiratsuka et al. teaches of determining pixel data on color space in accordance with color adjustment parameters (column 9,lines 5-25), which reads on calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and a boundary of the adjustment region, if it is determined in the region determination step that the pixel value of the image data is in the adjustment region.

11. Hiratsuka et al. fails to teach of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color.

12. Yumiba et al. teaches of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space (column 6,lines 64-67, column 7,lines 1-22), wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color (column 7,lines 1-41 and column 8,lines 4-21 and 37-44).

13. Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Hiratsuka et al. wherein Hiratsuka et al.'s apparatus is applied to designating a color adjustment area of Yumiba et al. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Hiratsuka et al. by the teaching of Yumiba et al. in order to change the color of a selected part of an image while maintaining the color of other parts unchanged and retaining color continuity between the changed part and unchanged part as evident in Yumiba et al column 1,lines 10-15).

14. Regarding claim 16, Hiratsuka et al teaches of a color pallet (5), color monitor (2) that displays a color image (4) before color adjustment and a color image in an after adjustment image window (7) for comparison (column 6,lines 57-67, column 7,lines 8-15 and column 9, lines 25-30). He also teaches of a color printer (10) (column 9,lines 47-49). This reads on image processing system for performing color matching based on a color correction table in an image processing apparatus in which a monitor and a printer are connected. Hiratsuka et al. teaches of determining if a pixel data are in LCH color

space (column 8,lines 17-25), which reads on a region determining means for determining whether a pixel value of input image data is in the adjustment region. Hiratsuka et al. teaches of determining pixel data on color space in accordance with color adjustment parameters (column 9,lines 5-25), which reads on adjusted value calculating means for calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and a boundary to the adjustment region, if said region determining means determines that the pixel value of the image data is in the adjustment region.

13. Hiratsuka et al. fails to teach of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color.

14. Yumiba et al. teaches of a designating means for designating, a reference color, and adjusted color of the reference color, and an adjustment region in a color space (column 6,lines 64-67, column 7,lines 1-22), wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes the reference color and the adjusted color (column 7,lines 1-41 and column 8,lines 4-21 and 37-44).

15. Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Hiratsuka et al. wherein Hiratsuka et al.'s apparatus is applied to designating a color adjustment area of Yumiba et al. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Hiratsuka et al. by the teaching of Yumiba et al. in order to change the color of a selected part of an image while maintaining the color of other parts unchanged and retaining color continuity between the changed part and unchanged part as evident in Yumiba et al column 1,lines 10-15).

16. Regarding claim 17, Arguments are analogous to those stated in the rejection of claim 1. A program that performs a program is inherently taught as evidenced by the computer (1) (figure 3 and column 6,lines 57-67).

17. Regarding claim 18, Hiratsuka et al. teaches of a hard disk (column 6,lines 62-64), which reads on a recording medium.

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiratsuka et al. US 6108441 in view of Yumiba et al. US 5289295 and further in view of Magee US 5231504.

19. Regarding claim 3, Hiratsuka et al. US 6108441 in view of Yumiba et al. teaches all of the limitations of claims 1 and 2.

20. Hiratsuka et al. US 6108441 in view of Yumiba et al. fails to teach that the geometric figure is an ellipsoid.

21. Magee teaches of an elliptically shaped region (column 14,lines 10-14), which reads on the geometric figure is an ellipsoid.

The image processing apparatus of Hiratsuka et al. in view of Yumiba et al. could have easily been modified with the elliptically shaped region of Magee. This modification would have been obvious to one skilled in the art at the time of the invention to represent the color adjustment region of an image processing apparatus.

22. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiratsuka et al. US 6108441 in view of Yumiba et al. US 5289295 and further in view of Kobayashi US 5937089.

23. Regarding claim 4, Hiratsuka et al. US 6108441 in view of Yumiba et al. teaches all of the limitations of claims 1 and 2.

24. Hiratsuka et al. US 6108441 in view of Yumiba et al. fails to teach that the geometric figure is a polyhedron.

25. Kobayashi teaches of a polyhedron (column 5,lines 20-28), which reads on the geometric figure is a polyhedron.

The image processing apparatus of Hiratsuka et al. in view of Yumiba et al. could have easily been modified with the polyhedron region of Kobayashi. This modification would have been obvious to one skilled in the art at the time of the invention to represent the color adjustment region of an image processing apparatus.

26. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiratsuka et al. US 6108441 in view of Yumiba et al. US 5289295 and further in view of Hiratsuka et al. US 6108441 and further in view of Ueda US 6172681.

27. Yumiba et al. in view of Hiratsuka et al. teaches all of the limitations of claims 1,8 and 9.

28. Yumiba et al. in view of Hiratsuka et al. fails to teach of a region determining means further determines that image data is inside a rectangular parallelepiped region containing the adjustment region in the color space and if said region determining means determines that the image data is inside the rectangular parallelepiped region, said coordinate transforming means transforms the coordinates of the image data.

29. Ueda teaches of a rectangular parallelepipeds (column 7,lines 40-60), which read on a region determining means further determines that image data is inside a rectangular parallelepiped region containing the adjustment region in the color space and if said region determining means determines that the image data is inside the rectangular parallelepiped region, said coordinate transforming means transforms the coordinates of the image data.

The image processing apparatus of Hiratsuka et al. in view of Yumiba et al. could have easily been modified with the rectangular parallelepiped of Ueda. This modification would have been obvious to one skilled in the art at the time of the invention to represent the color adjustment region of an image processing apparatus.

Conclusion

Any inquiry concerning this communication should be directed to Michael Burleson whose telephone number is (571) 272-7460 and fax number is (571) 273-7460. The examiner can normally be reached Monday thru Friday from 8:00 a.m. – 4:30p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twlyer Lamb can be reached at (571) 272-7471

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April 15, 2007